Creating Priorities in a Building that Needs **Everything**

HANBURY McKIM&CREED ENGINEERS SURVEYORS PLANNERS

Learning objectives

1. **Understand the Challenges of Renovating Aging Laboratory Buildings:** Gain insights into the common issues faced when renovating historic or outdated academic laboratory spaces, including outdated building systems, space constraints, and other odd existing conditions.
2. **Recognize Opportunities:** Explore new standards that can be implemented within renovation projects such as new sustainability, safety, and flexibility.
3. **Learn the Importance of Collaboration in Facility Renovation:** Learn about the roles of various stakeholders (designers, higher education facilities teams, campus sustainability experts, and laboratory directors) in creating comprehensive renovation plans that meet both current and future needs.
4. **Create Priorities:** Explore the process of identifying clear priorities while considering functionality, safety, sustainability while balancing short- and long-term goals.

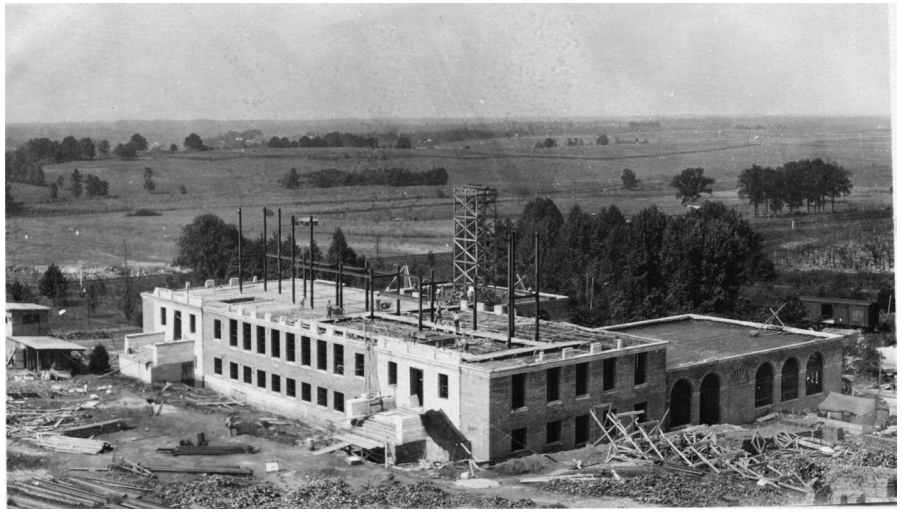
Presenters

Tommy Norby – Senior Project Engineer

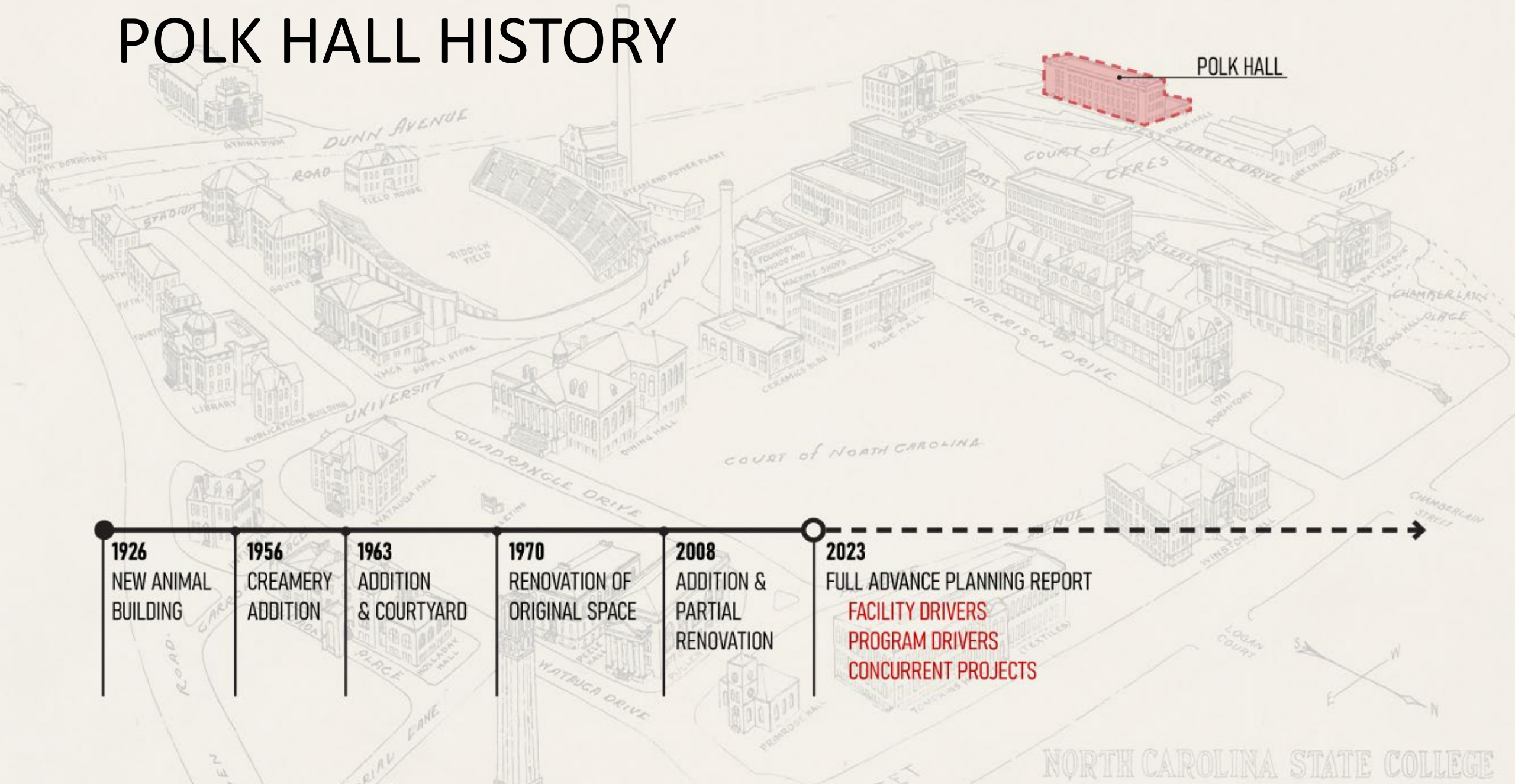
Carlie Gillespie – Laboratory Designer

Polk Hall – 1920s

Polk Hall – 1920s



POLK HALL HISTORY



1926
NEW ANIMAL BUILDING

1956
CREAMERY ADDITION

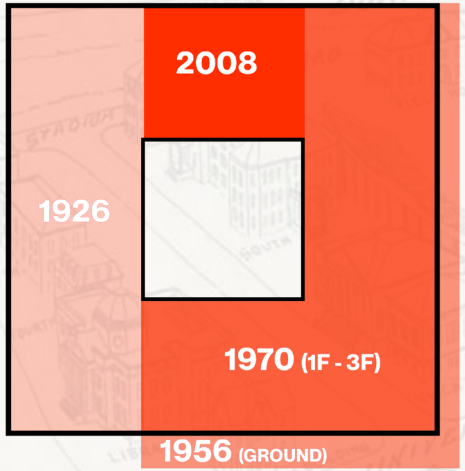
1963
ADDITION & COURTYARD

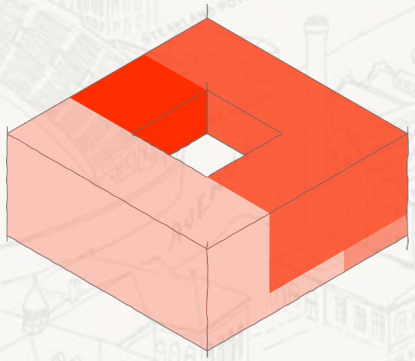
1970
RENOVATION OF ORIGINAL SPACE

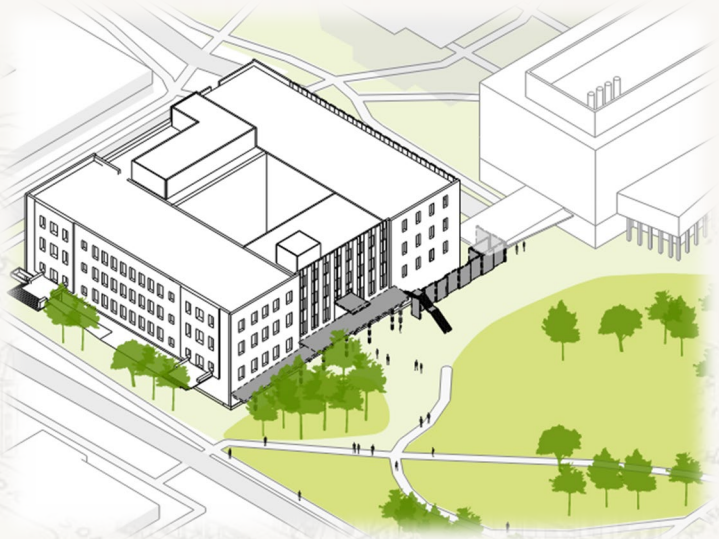
2008
ADDITION & PARTIAL RENOVATION

2023
FULL ADVANCE PLANNING REPORT
- FACILITY DRIVERS
- PROGRAM DRIVERS
- CONCURRENT PROJECTS

POLK HALL HISTORY







LET'S START HERE
(Advanced Planning)

1926 NEW ANIMAL BUILDING

1956 CREAMERY ADDITION

1963 ADDITION & COURTYARD

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2023 FULL ADVANCE PLANNING REPORT
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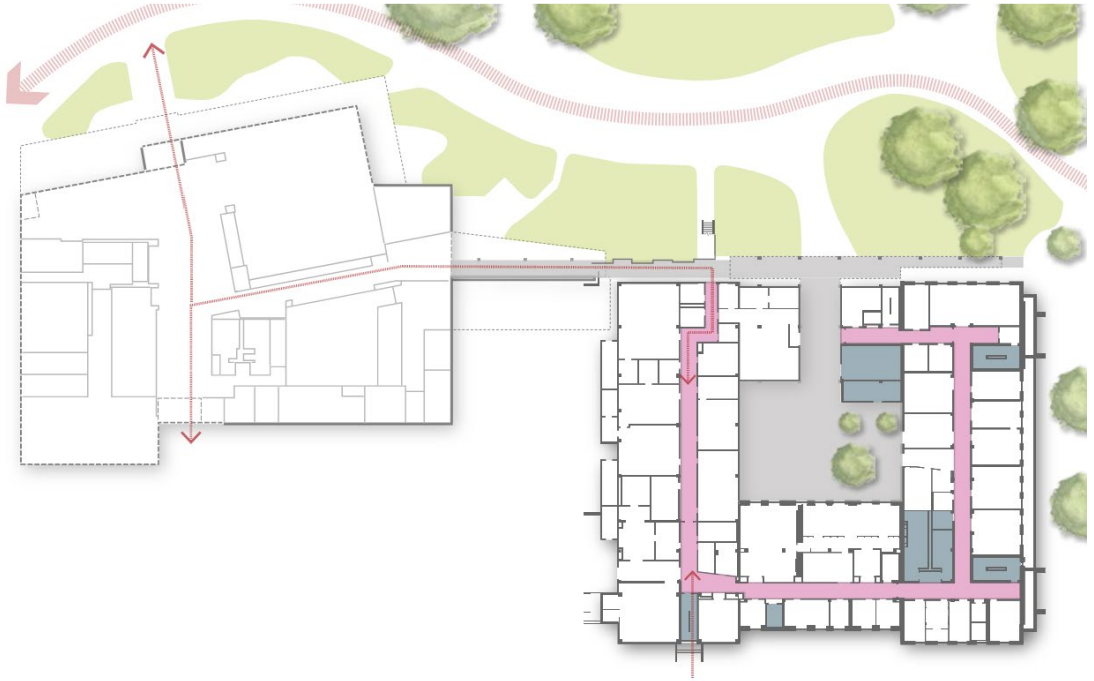
Why now?

- BRAND NEW SCIENCE BUILDING RIGHT NEXT DOOR
- GROWING NEED TO DO LIST
- RECENT BUDGET APPROVAL



ground floor

ASSEMBLING THE TEAM

- CAMPUS LEADERSHIP
- DEPARTMENT HEADS
- FACILITIES

ESTABLISHING GOALS

ESTABLISHING GOALS: Results

Transparency (safety)
Old systems

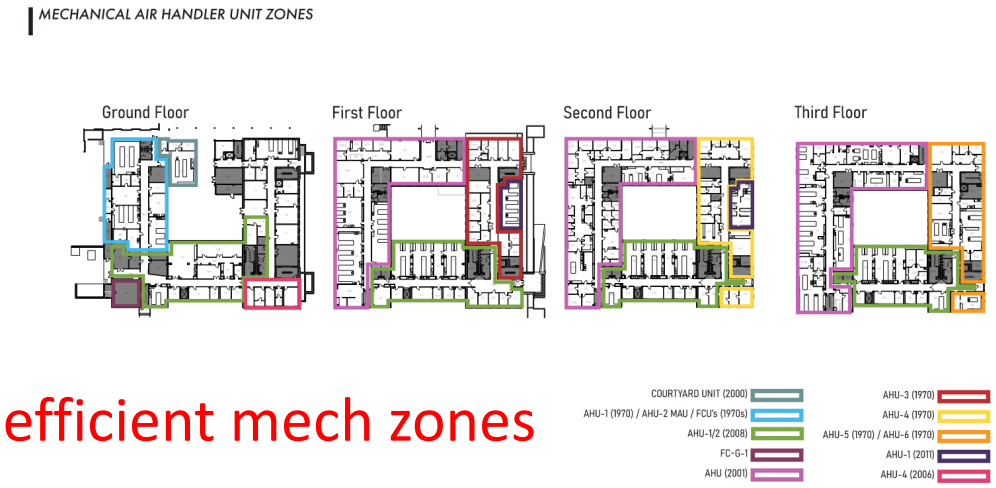
Transparency (sharing)
Shared spaces

Transparency (campus VISIBILITY)
Inclusiveness

UNDERSTANDING THE ‘EVERYTHING’

Aging systems

Differing building ages



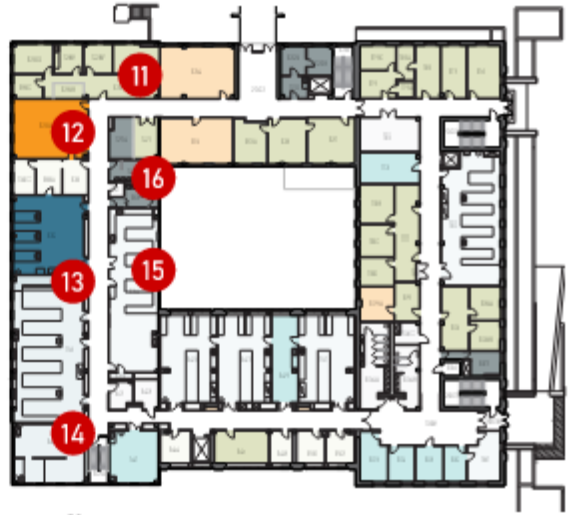
Inefficient mech zones

High energy use

ground floor

- ISB connection
  potential microscopy suite

- 01 Xu teaching lab - higher floor level
- 02 non-accessible restrooms, not required
- 03 teaching lab, stepped room
- 04 Doherty lab - requires dark room
  some moisture concerns
- 05 Large cold room - underutilized
- 06 29 - shared cell culture - problematic
  29A - Dept. centrifuge (Doherty + Xu)
  31 Sartor lab - needs cold room access
- 07 Dohergy lab support - plumbing issues
- 08 original teaching - vacant, issues



first floor

- consider entry sequence
  would like increased transparency

- 11 Biochemistry office suite
- 12 Flexible teaching for 32-40 students
  no windows, some moisture concerns
- 13 Ascencio-Ibanez and Simpson labs
  active, large student engagement
- 14 Cell culture lab, underutilized
- 15 Plant Research shared lab
  interior windows, recent renovation, shared support
- 16 non-accessible restrooms, may not be required

second floor

third floor

- could support relocated ground floor labs
  prefer shared lab support spaces

- 31 Vacated research lab and lab support
- 32 Recently renovated lab and office space
- 33 Shared autoclave room
- 34 non-accessible restrooms, may not be required
- 35 Cold room, unused

FACILITY DRIVERS

1. Ongoing envelope concerns
- significant roof and windows

2. Aging mechanical systems
- complicated layout with ten individual air handler units
- lack of consistent controls and monitoring
- very high energy use

3. Aging electrical systems
- electrical equipment (panels, feeders, etc) is beyond life expectancy and in need of replacement

PROGRAM DRIVERS

4. Environmental Health and Safety
- two separate lab areas have recirculating air
- limited monitoring of fume hoods

5. Working & Learning Environment
- poor acoustics and air quality
- inflexible, isolated lab spaces
- limited backup capacity
- limited collaboration area
- most areas in need of renovation
- no lactation, wellness, or gender-neutral restrooms

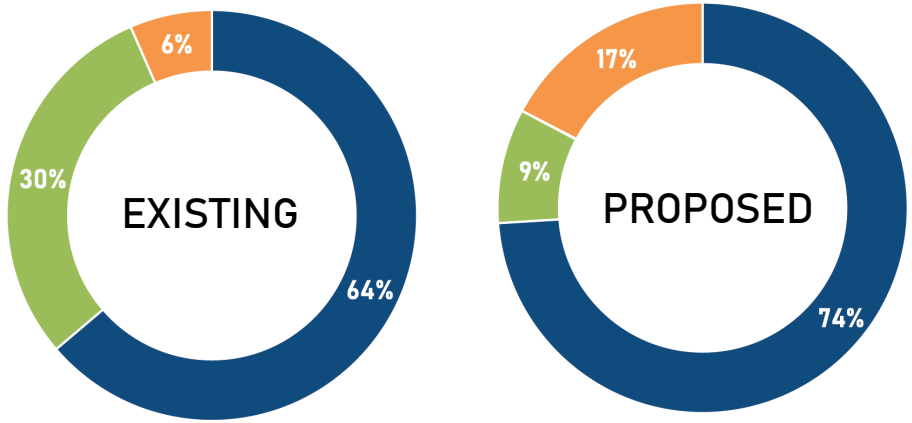
6. Access & Orientation
- poor accessibility
- some stairs and elevators do not meet ADA code
- 2 of 4 entrances are inaccessible
- several inaccessible restrooms

CONCURRENT PROJECTS

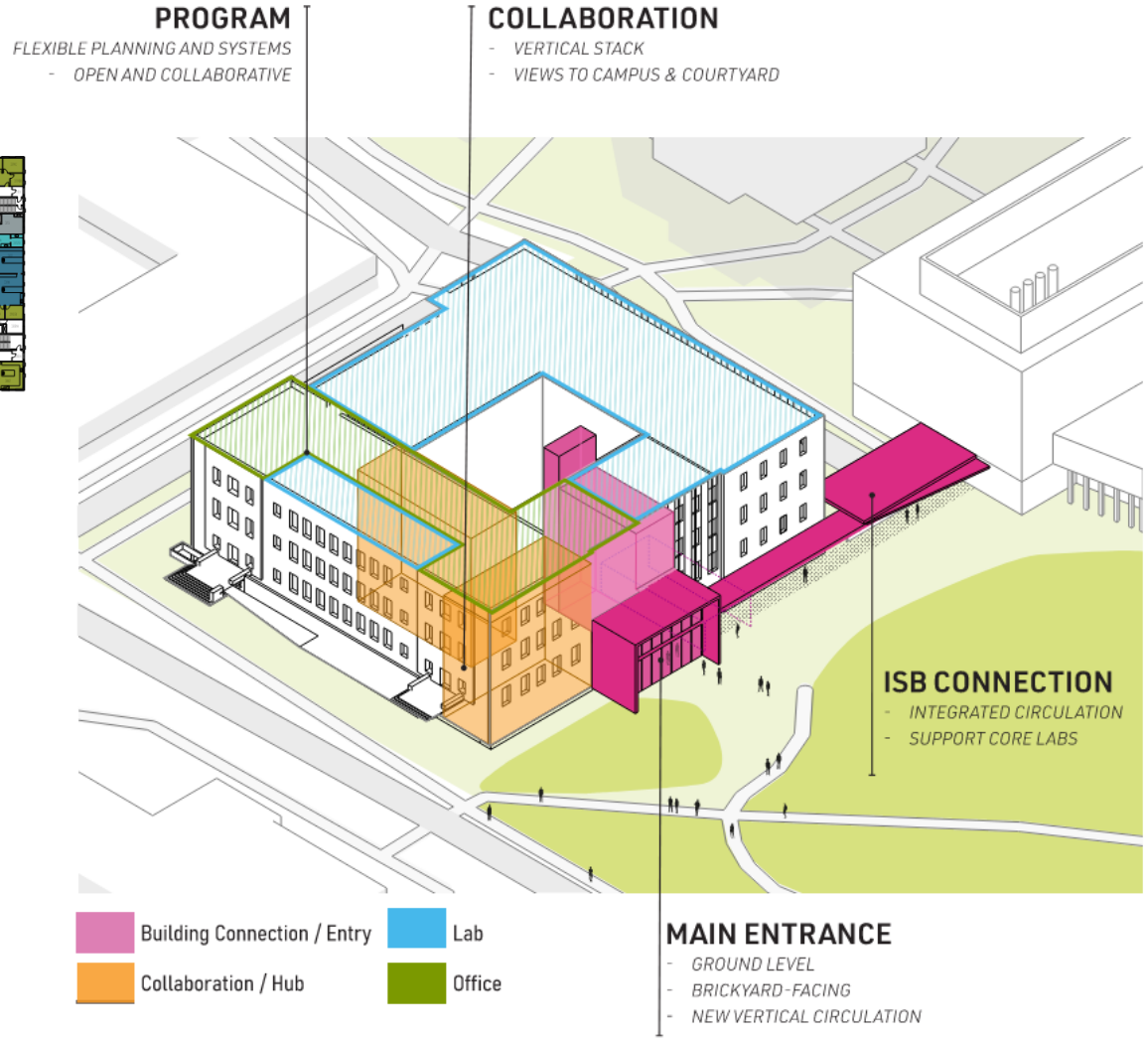
7. Integrated Sciences Building
- Polk Hall to provide core lab space
- Physical connection for students and research

8. Campus Electrical Work
- replacement of distribution transformer (in same location) and new MV feeder via new duct-bank to courtyard

FUTURE opportunities



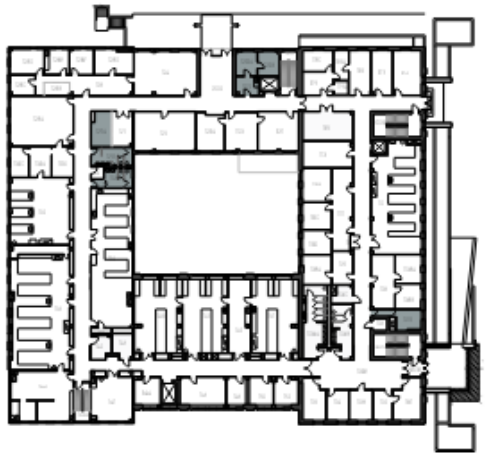
LAB
OFFICE
COLLABORATION



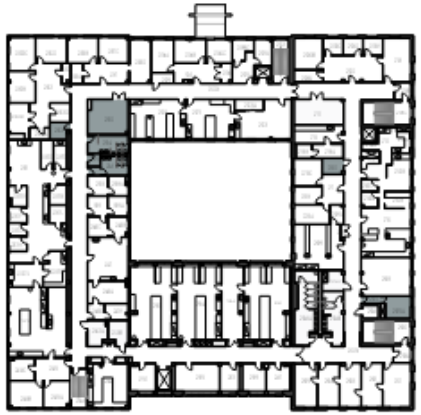
PHASE 1

Ground Floor

First Floor



Second Floor



Third Floor

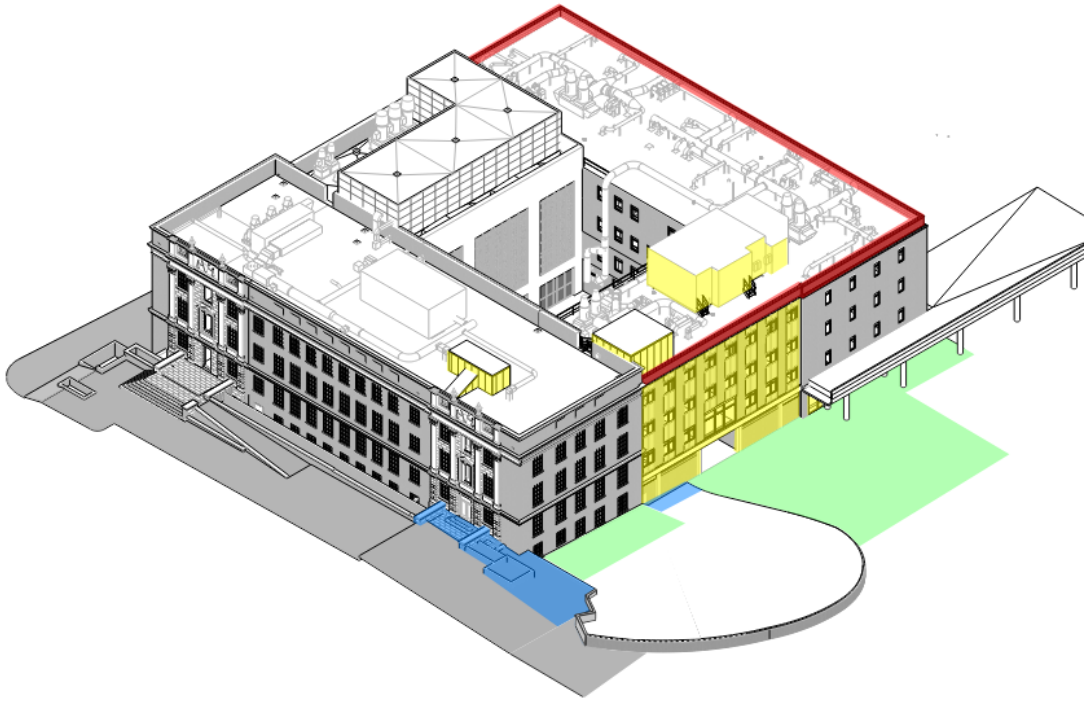
SCOPE 1 CRITICAL BUILDING SYSTEMS

SCOPE 2 THIRD FLOOR LAB SCOPE (FIRST)

SCOPE 3 GROUND FLOOR LAB SCOPE (FOLLOWING THIRD FLOOR)

Phase 2??

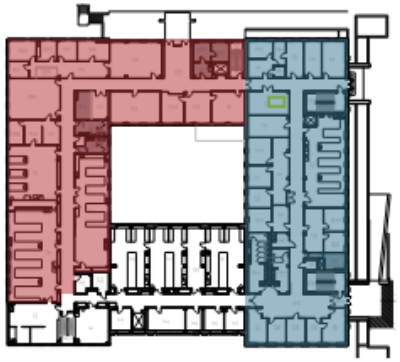
- CLEAR PATH FORWARD ALREADY SET
- TRANSPARENCY + CONNECTION TO NEW BUILDING
- ROOF + WINDOW REPLACEMENTS!



Good/better/best scopes

Ground Floor

First Floor



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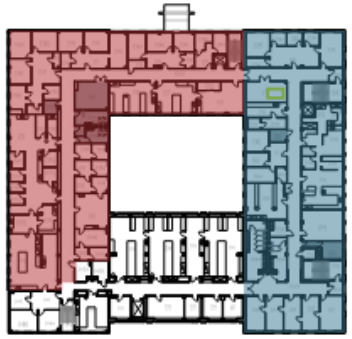

Third Floor

Roof

- IDEATE HOW TO GET MORE DONE

01	NORTH/WEST WING BASE BID	$20,887,000
02	'GOOD' SCOPE (MINIMUM REQUIRED)	+ $2,175,000
03	'BETTER' SCOPE (MINIMUM REQUIRED)	+ $3,750,000
04	'BEST' SCOPE	+ $11,990,500

Lessons learned

- LEARN THE HISTORY OF THE BUILDING
- CONSIDER WHO YOUR STAKEHOLDERS ARE AND WHO IS AT THE TABLE
- SHORT TERM FIXES ARENT ALWAYS CONDUSIVE TO LONG TERM SUCCESS

QUESTIONS?